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providing said semiconductor film with a catalyst metal-containing material;

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crystallizing said semiconductor film by heating in a way that causes said catalyst metal to diffuse through the semiconductor film and function to promote the crystallization of the semiconductor film;

forming a gettering layer comprising phosphorus over said semiconductor film after the crystallization; and

heating said semiconductor film and said gettering layer at a temperature from 500°C to 800°C in order to getter the catalyst metal in said semiconductor film using said gettering layer.

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32. (Amended) A method according to claim 26 wherein said catalyst metal is selected from the group consisting of Ni, Fe, Co, and Pt.

34. (Amended) A method of manufacturing a device comprising:
providing a substantially intrinsic semiconductor film on an insulating surface;

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providing said semiconductor film with a catalyst metal-containing material;

crystallizing said semiconductor film by heating in a way that causes said catalyst metal to diffuse through the

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semiconductor film and function to promote the crystallization
of said semiconductor film;

forming a gettering layer comprising phosphorus over said
semiconductor film after the crystallization; and
heating said semiconductor film and said gettering layer in
order to getter the catalyst metal in said semiconductor film by
said gettering layer.

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39. (Amended) A method according to claim 34 wherein said
catalyst metal is selected from the group consisting of Ni, Fe,
Co, and Pt.

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42. (Amended) A method of manufacturing a device comprising:
providing a semiconductor film on an insulating surface;
providing a catalyst metal-containing material on said
semiconductor film;

crystallizing said semiconductor film by heating in a way
that causes said catalyst metal to diffuse through the
semiconductor film and function to promote the crystallization
of said semiconductor film;

forming a gettering layer comprising phosphorus over said
semiconductor film after the crystallization; and

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heating said semiconductor film and said gettering layer in a nitrogen atmosphere in order to getter the catalyst metal contained in said semiconductor film by said gettering layer.

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48. (Amended) A method according to claim 42 wherein said catalyst metal is selected from the group consisting of Ni, Fe, Co, and Pt.

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51. (Amended) A method of manufacturing a device having a junction, said method comprising:

providing a semiconductor film comprising amorphous silicon on an insulating surface;

providing a catalyst metal-containing material on said semiconductor film;

crystallizing said semiconductor film by heating in a way that causes said metal to diffuse through the semiconductor film and to promote the crystallization thereof;

forming a gettering layer comprising phosphorus over said semiconductor film after the crystallization;

heating said semiconductor film and said gettering layer at a temperature from 500°C to 800°C in order to getter the metal included in said semiconductor film by said gettering layer; and

forming a doped semiconductor film on said semiconductor film to form a junction.

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57. (Amended) A method according to claim 51 wherein said catalyst metal is selected from the group consisting of Ni, Fe, Co, and Pt.

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59. (Amended) A method of manufacturing a device having a junction, said method comprising:

- providing a substantially intrinsic semiconductor film on an insulating surface;
- providing a catalyst metal on said semiconductor film;
- crystallizing said semiconductor film by heating to cause said catalyst metal to diffuse through the semiconductor film and to promote the crystallization of said semiconductor film;
- forming a gettering layer comprising phosphorus over said semiconductor film after the crystallization thereof;
- heating said semiconductor film and said gettering layer in order to getter the catalyst metal in said semiconductor film by said gettering layer; and
- forming a junction using said intrinsic semiconductor film.

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64. (Amended) A method according to claim 59 wherein said catalyst metal is selected from the group consisting of Ni, Fe, Co, and Pt.

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67. (Amended) A method of manufacturing a device having a junction, said method comprising:
providing a semiconductor film comprising amorphous silicon formed on an insulating surface;

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WAX } providing a catalyst metal-containing material on said semiconductor film;
crystallizing said semiconductor film by heating in a way that causes said catalyst metal to diffuse through the semiconductor film and function to promote the crystallization of said semiconductor film;

forming a gettering layer comprising phosphorus over said semiconductor film after the crystallization; and

heating said semiconductor film and said gettering layer in a nitrogen atmosphere in order to getter the catalyst metal contained in said semiconductor film by said gettering layer;
and

forming a junction on said semiconductor film.

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F12 } 73. (Amended) A method according to claim 67 wherein said catalyst metal is selected from the group consisting of Ni, Fe, Co, and Pt.

76. (Amended) A method of manufacturing a device, comprising:
providing a semiconductor film on an insulating surface;

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forming a catalyst metal-containing material on said semiconductor film, said catalyst being a material which facilitates crystallization of said semiconductor film, but which when present in a final product of the device degrades operation of the device;

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crystallizing said semiconductor film by heating in a way that causes said catalyst metal-containing material to diffuse into at least a part of the semiconductor film, said catalyst metal-containing material when so diffused functioning to facilitate said crystallization;

forming a gettering layer comprising phosphorus over said semiconductor film after said crystallization; and

processing said semiconductor film and said gettering layer to remove at least one portion of said catalyst metal in said semiconductor film.

81. (Amended) A method of manufacturing a device comprising:
providing a semiconductor film on an insulating surface;
providing said semiconductor film with a metal-containing material;

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crystallizing said semiconductor film by heating in a way that causes said metal to diffuse through the semiconductor film and function to promote the crystallization of the semiconductor film;

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introducing a gettering material into a portion of said crystallized semiconductor film;

heating said semiconductor film after introducing said gettering material at a temperature from 500°C to 800°C in order to getter the metal in said semiconductor film; and

removing said portion after gettering the metal in said semiconductor film.

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82. (Amended) A method of manufacturing a device comprising: providing a semiconductor film doped with boron at a concentration of 0.001-0.1 atm% on an insulating surface;

providing said semiconductor film with a metal-containing material;

crystallizing said semiconductor film by heating in a way that causes said metal to diffuse through the semiconductor film and function to promote the crystallization of said semiconductor film;

forming a gettering layer comprising phosphorus over said semiconductor film after the crystallization; and

heating said semiconductor film and said gettering layer in order to getter the metal in said semiconductor film by said gettering layer.

83. (Amended) A method of manufacturing a device comprising:

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providing a substantially intrinsic semiconductor film on an insulating surface;

providing said semiconductor film with a metal-containing material;

crystallizing said semiconductor film by heating in a way that causes said metal to diffuse through the semiconductor film and function to promote the crystallization of said semiconductor film;

introducing a gettering material into a portion of the crystallized semiconductor film;

heating said semiconductor film after introducing said gettering material in order to getter the metal in said semiconductor film; and

removing said portion after gettering the metal in said semiconductor film.

84. (Amended) A method of manufacturing a device comprising:

providing a semiconductor film doped with boron at a concentration of 0.001-0.1 atm% on an insulating surface;

providing said semiconductor film with a metal-containing material;

crystallizing said semiconductor film by heating in a way that causes said metal to diffuse through the semiconductor film

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and function to promote the crystallization of said semiconductor film;

introducing a gettering material into a portion of the crystallized semiconductor film;

heating said semiconductor film after introducing said gettering material in order to getter the metal in said semiconductor film; and

removing said portion after gettering the metal in said semiconductor film.

85. (Amended) A method of manufacturing a device comprising:

providing a semiconductor film on an insulating surface;

providing a metal-containing material on said semiconductor film;

crystallizing said semiconductor film by heating in a way that causes said metal to diffuse through the semiconductor film and function to promote the crystallization of said semiconductor film;

introducing a gettering material into a portion of the crystallized semiconductor film;

heating said semiconductor film in a nitrogen atmosphere after introducing said gettering material in order to getter the metal contained in said semiconductor film; and

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removing said portion after gettering the metal in said semiconductor film.

86. (Amended) A method of manufacturing a device having a junction, said method comprising:

providing a semiconductor film doped with boron at a concentration of 0.001-0.1 atm% on an insulating surface;

providing a metal on said semiconductor film;

crystallizing said semiconductor film by heating to cause said metal to diffuse through the semiconductor film and to promote the crystallization of said semiconductor film;

forming a gettering layer comprising phosphorus over said semiconductor film after the crystallization thereof;

heating said semiconductor film and said gettering layer in order to getter the metal in said semiconductor film by said gettering layer; and

forming a junction using an intrinsic semiconductor film.

87. (Amended) A method of manufacturing a device having a junction, said method comprising:

providing a substantially intrinsic semiconductor film on an insulating surface;

providing a metal on said semiconductor film;

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crystallizing said semiconductor film by heating to cause said metal to diffuse through the semiconductor film and to promote the crystallization of said semiconductor film;

introducing a gettering material into a portion of the crystallized semiconductor film;

heating said semiconductor film after introducing said gettering material in order to getter the metal in said semiconductor film by said phosphorus;

removing said portion after gettering the metal in said semiconductor film; and

forming a junction using a doped semiconductor film.

88. (Amended) A method of manufacturing a device having a junction, said method comprising:

providing a semiconductor film doped with boron at a concentration of 0.001-0.1 atm% on an insulating surface;

providing a metal on said semiconductor film;

crystallizing said semiconductor film by heating to cause said metal to diffuse through the semiconductor film and to promote the crystallization of said semiconductor film;

introducing a gettering material into a portion of the crystallized semiconductor film;

heating said semiconductor film and said gettering material in order to getter the metal in said semiconductor film;

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removing said portion after gettering the metal in said semiconductor film; and
forming a junction using an intrinsic semiconductor film.

89. (Amended) A method of manufacturing a device comprising:
providing a semiconductor film on an insulating surface;
forming a metal-containing material on said semiconductor film, said metal being a material which facilitates crystallization of said semiconductor film, but which when present in a final product of the device degrades operation of the device;

crystallizing said semiconductor film by heating in a way that causes said metal-containing material to diffuse into at least a part of the semiconductor film, said metal-containing material when so diffused functioning to facilitate said crystallization;

introducing a gettering material into a portion of the crystallized semiconductor film;

~~processing~~ processing said semiconductor film after introducing said gettering material to remove at least one portion of said metal in said semiconductor film; and

removing said portion of the crystallized semiconductor film after gettering the metal in said semiconductor film.

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99. (Amended) A method according to any one of claims 81-89

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wherein said metal is selected from the group consisting of Ni,
Fe, Co, and Pt.

104. (Amended) A method according to any one of claims 81,

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83-85, or 87-89, wherein said gettering material comprises
phosphorus.